

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 125

**Country Name: Papua New Guinea**

**TABLE 1: Monthly Rainfall**

Station (include data period)			January 2018				
	November 2017 Total	December 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Momase Region</b>							
Madang (1944-2018)	405.8	483.8	241.2	265.6	381.4	340.4	16/70
Nadzab(1973-2018)	80.0	267.0	86.0	134.0	178.9	154.5	7/44
Wewak (1894-2018)	348.0	164.6	112.4	107.5	158.0	134.4	25/63
Vanimo (1918-2018)	161.8	280.4	110.2	202.6	339.8	269.0	7/67
<b>Highlands Region</b>							
Goroka (1948-2018)	155.0	330.0	155.2	203.3	266.6	226.0	11/56
<b>NGI Region</b>							
Momote (1949-2018)	139.0	197.4	150.0	244.3	319.5	277.7	10/62
Kavieng (1916-2018)	237.0	506.2	497.0	272.6	362.0	334.6	81/87
<b>Southern region</b>							
Misima (1917-2018)	202.8	170.4	262.2	197.1	317.4	276.0	43/90
Port Moresby (1875-2018)	5.8	172.0	320.8	133.1	223.8	177.8	<b>120/130</b>

**TABLE 2: Three-monthly Rainfall  
November 2017 to January 2018**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #121]

Station	Three-month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecast probs.* (include LEPS)	Verification* (Consistent, Near-consistent Inconsistent)?
<b>Momase Region</b>							
Madang (1944-2018)	1130.8	953.0	1120.0	1036.2	47/69	34/32/34 (-0.8)	Near-consistent
Nadzab(1973-2018)	433.0	370.7	474.5	409.7	27/43	34/33/33 (-2.6)	Near-consistent
Wewak (1894-2018)	625.0	435.9	544.7	479.9	53/60	29/35/36 (9.1)	Consistent
Vanimo (1918-2018)	552.4	642.2	832.5	734.8	12/59	33/33/34 (-1.4)	Near-consistent
<b>Highlands Region</b>							
Goroka (1948-2018)	640.2	516.4	642.0	569.4	31/48	34/32/34 (-2.3)	Near-consistent
<b>NGI Region</b>							
Momote (1949-2018)	468.4	736.6	894.7	833.0	2/61	34/34/32 (0.0)	Near-Consistent
Kavieng (1916-2018)	1240.2	784.7	945.1	849.0	82/85	34/32/34 (-0.9)	Near-Consistent
<b>Southern Region</b>							
Misima (1917-2018)	635.4	599.3	780.6	691.5	37/87	31/34/35 (2.3)	Near-consistent
Port Moresby (1875-2018)	498.6	299.7	424.6	365.0	99/118	27/37/36 (16.3)	Near-consistent

Period: \*below normal/normal/above normal

Predictors and Period used for November 2017 to January 2018 Outlooks (refer to OCOF #121): Nino 3.4 SST anomalies for August – September 2017

\* Forecast is consistent when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is near-consistent when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).

Forecast is inconsistent when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for  
March to May 2018**

**Predictors and Period used: Nino3.4 SST anomalies for December-January 2018**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
<b>Mamose Region</b>						
Madang (1944-2018)	46	1131.8	54		0.0	59.1
Nadzab(1973-2018)	53	389.0	47		-1.7	51.2
Wewak (1894-2018)	44	604.1	56		0.4	63.9
Vanimo (1918-2018)	50	705.6	50		-1.9	26.4
<b>Highlands Region</b>						
Goroka (1948-2018)	57	558.9	43		1.9	55.1
<b>NGI Region</b>						
Momote (1949-2018)	52	830.3	48		-1.5	37.7
Kavieng (1916-2018)	52	842.2	48		-1.6	47.5
<b>Southern Region</b>						
Misima (1917-2018)	23	791.8	77		30.3	70.3
Port Moresby (1875-2018)	39	382.0	61		6.1	60.6

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
<b>Momase region</b>							
Madang (1944-2018)	33	999.3	33	1203.0	34	-1.7	28.8
Nadzab (1973-2018)	36	362.1	36	428.7	28	-0.3	14.6
Wewak (1894-2018)	24	511.8	42	645.9	34	1.0	42.6
Vanimo (1918-2018)	32	615.9	38	839.9	30	-1.8	34.0
<b>Highlands Region</b>							
Goroka (1948-2018)	40	610.0	38	610.0	22	4.6	42.9
<b>New Guinea Islands Region</b>							
Momote (1949-2018)	33	744.0	35	928.0	32	-1.6	36.1
Kavieng (1916-2018)	43	772.8	26	943.8	31	3.0	49.2
<b>Southern Region</b>							
Misima (1917-2018)	15	693.5	36	998.7	49	18.0	46.9

Port Moresby (1875-2018)	25	308.1	32	450.4	<b>43</b>	3.6	39.4
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**TABLE 4: Seasonal Climate Outlooks using POAMA2 for  
March to May 2018**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
<b>Momase Region</b>							
Madang	<b>45</b>	1002	10	1201	<b>45</b>		
Nadzab	<b>52</b>	298	5	409	43		
Wewak	<b>52</b>	508	18	630	30		
<b>New Guinea Islands Region</b>							
Momote	<b>37</b>	698	33	854	30		
Kavieng	<b>42</b>	769	30	998	28		
<b>Southern Region</b>							
Misima	<b>64</b>	665	6	941	30		
Port Moresby	<b>55</b>	327	6	498	39		
Daru	5	828	<b>74</b>	939	21		

## **Summary Statements**

### **Rainfall for January 2018:**

Rainfall for the month of January was below-normal at Momase Region, Highlands & Momote station; normal at Wewak & Misima; and above normal at Kavieng and Port Moresby.

### **Accumulated rainfall for November 2017 to January 2018, including outlook verification:**

Rainfall for the last three months was below normal at Vanimo and Momote; above normal at Madang, Wewak, Kavieng and Port Moresby; while the remaining three stations recorded normal rainfall.

Forecasts were near- consistent for all stations except at Wewak with consistent forecast.

Skills range from very low to high.

### **Outlooks for March to May 2018:**

#### **1. SCOPIC:**

The SCOPIC seasonal rainfall outlook for March to May 2018 shows little guidance as the chances of above-normal, normal and below normal rainfall are similar for Madang, Nadzab, Vanimo and Momote.

The outlook for Wewak shows normal as the most likely outcome, with above-normal the next most likely. Below-normal is the least likely.

Goroka and Kavieng station shows below-normal rainfall as the most likely, with normal as the next most likely for Goroka whilst above-normal the next most likely for Kavieng station.

Southern Region shows above-normal as the most likely outcome, with normal the next most likely. Below-normal is the least likely.

Confidence range from very low to high skill.

## 2. POAMA:

The POAMA model favours normal rainfall for Daru with above-normal the next most likely. The outlook at Madang station shows equal chances for below-normal and above-normal totals; normal is the least likely outcome. At all the other stations below-normal rainfall is the favoured or most likely outcome.

**NB: The X LEPS % score has been categorised as follows:**

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$

Exceptional:  $X \geq 35$